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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,384	03/26/2001	Yuichi Shiota	P 276714 41069-USPD2C-JSJ	8374

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EXAMINER

FORD, JOHN K

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. ()

Applicant(s) **DF****09/816,384****Shiroka et al.**

Examiner

FORD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on **Sept 30, 2002**
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) **2, 5, 6, 9-11** is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) **2, 5, 6, 9-11** is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) **8**
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Applicant's response has been carefully considered and has been assigned as Paper No. 7 in this file. Applicant's comments are addressed in the rejections below.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-156049 in view of JP 56-149819 and DT '451 (Figs 5 & 6) or Nagao et al.

JP '049 appears to show and disclose all of the claimed features with the exception of an offset blower and corrugated fins between each of the tubes in evaporator core 26.

As to the first deficiency, JP '819 (Fig 1) teaches an offset blower. To have replaced blower case 23 of JP '049 with the offset blower casing taught by JP '819 (Fig 1) would have been obvious to one of ordinary skill, to conserve the use of vertical space. Such an offset blower would advantageously reduce the amount of vertical installation space required and would make the unit adaptable for mounting in vehicles which make the unit adaptable for mounting in vehicles which didn't have as much vertical space as disclosed in JP '049.

Regarding applicant's comments that suggest that blower 6 of JP '819 does not blow air horizontally into the space below the evaporator, applicant is clearly incorrect

as a matter of fact. Air is clearly introduced into the space from the blower in an approximately horizontal manner.

DT '451 (Fig. 6 and Fig. 5) teaches tubes 37 with serpentine fins between them (Fig. 5) aligned at an angle (Figure 6) relative to an offset blower 27.

To have used such a heat exchanger construction as taught by DT '451 with tubes oriented in the direction of airflow as the heat exchanger 28, in JP '049, would have been obvious to one of ordinary skill in the art.

Similarly, to have used Nagao's heat exchanger 2 in JP '049 so that air flow occurred in the direction of the tubes (as taught by Nagao) would have been obvious to one of ordinary skill.

Claims 2, 5, 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 2, 5, 6 and 9-11 above, and further in view of Netherlands 166433.

To have installed JP '049 in the center of the vehicle (as taught by Netherlands '433) would have been obvious in vehicles to avoid taking up too much room in the lateral (right-left) direction. The Examiner also believes that JP '049 is inherently installed in the center of the vehicle. Notwithstanding that belief, Netherlands '433 clearly teaches such placement.

Claims 2, 5, 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claims 2, 5, 6 and 9-11 above, and further in view of Brandecker or Gebhardt or Mullin or Bates or Marsteller.

Each of these references teaches an offset bottom-feed fan and heat exchanger tubes oriented generally parallel to fluid discharged from the fan.

To have oriented the tubes in JP '049/JP '819/DT '451 or JP '049/JP '819/Nagao to be generally parallel to the fan discharge would have been obvious to one of ordinary skill in the art, to improve air flow.

In addition, Gebhardt at 34, Mullin at 43, Marsteller at 42 and Brandecker at 37 teach drains located under the evaporators of these respective units on the upstream side. To the extent that JP '049 does not meet the limitations as to drain placement specified in claim 9, the Examiner relies on these other (obvious) locations which are advantageously simple and necessary. As a basis for this approach the Examiner relies on the legal precedent of In re Gordon 18USPQ2d 1885 (Fed. Cir. 1991).

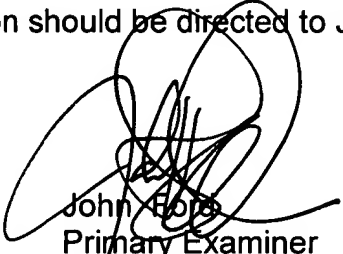
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to John Ford at telephone number 703-308-2636.



John K. Ford
Primary Examiner
Art Unit 3743

John K. Ford
Primary Examiner